

REMARKS

The above amendment with the following remarks is submitted to be fully responsive to the Official Action of January 15, 2003. Reconsideration of this application in light of the amendment and the allowance of this application are respectfully requested.

Claims 12-20 stand rejected under 35 U.S.C. §112, second paragraph, as being indefinite. The Examiner noted that claim 12 recites elements in the body of the claim that appear to be a double inclusion of the "nozzle" recited in the preamble. In response, claim 12 has been amended to delete the reference to the nozzle in the preamble. Therefore, it is believed that this rejection should be withdrawn.

Claims 12, 15, 18, 19 and 20 stand rejected under 35 U.S.C. §102(e) as being anticipated by Popp. In response, claim 12 has been amended to clarify the present invention. As a result, it is believed that newly amended independent claim 12 is neither anticipated nor rendered obvious by the Popp reference for the following reasons.

The present invention as recited in newly amended independent claim 12 requires a fuel injector having a substantially tubular retainer with a nozzle support portion having an engagement opening with an inner peripheral surface, and a nozzle housing positioned within the retainer which includes a nozzle shank having an outer peripheral surface, an elongated valve cavity adapted to receive a valve element and at least one injection hole adapted to spray fuel. The inner peripheral surface of the nozzle support portion creates an interference fit with the outer peripheral surface of the nozzle shank to create a seal interface.

The Popp reference fails to disclose important claimed features of the present invention. Admittedly, Popp discloses a fuel injector having a housing 32 including a cylindrical body tube 36 and connected nose piece 38. Moreover, Popp discloses a valve body sleeve 58 positioned within the cylindrical body tube. In addition, the Popp reference discloses a nozzle 40 press fit into the nose piece at the proximal end of the nose

piece. Therefore, it appears that at best, the cylindrical body tube 36 corresponds to the tubular retainer of claim 12 of the present application so that the nose piece corresponds to the claimed nozzle support portion of the tubular retain of claim 12. Likewise, as suggested by the Examiner the nozzle housing is then arguably suggested by the sleeve 58. However, then the Examiner suggests that nozzle 40, which is a small angular ring press fit into the nozzle support portion, corresponds to the nozzle shank of claim 12. However, claim 12 requires the nozzle shank to be part of the nozzle housing and the nozzle 40 of the Popp reference is not suggested as part of sleeve 58. In fact, Popp specifically teaches away from such an interpretation by suggesting that the nozzle 40 could be integrally provided on nose piece 38. This would correspond to a suggestion that the nozzle shank of Applicants' present invention could be formed on the nozzle support portion. However, claim 12 specifically recites two separate elements and therefore is not directed to such an integration. Importantly, amended independent claim 12 also requires the nozzle shank to include an elongated valve cavity adapted to receive a valve element. The small annular ring disclosed by the Popp reference as a nozzle 40 does not function as a nozzle shank to receive a valve element. The nozzle 40 simply does not form an elongated valve cavity adapted to receive a valve element but is merely an annular ring. Moreover, note that Popp fails to suggest in any manner the formation of an interference fit between sleeve 58 and nose piece 38. The interference fit between nozzle 40 and nose piece 38 is not positioned to prevent combustion gas from entering the space between sleeve 58 and sleeve 36 which is merely sealed by the axial loaded O-ring 95, not an interference fit. Therefore, it is believed that Popp fails to anticipate the present invention as recited in newly amended independent claim 12.

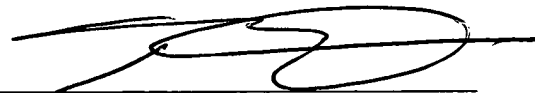
Accordingly, reconsideration and withdrawal of the rejection of independent claim 12 is in order and respectfully requested.

Dependent claims 13, 14, 16 and 17 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Popp. However, dependent claims 13, 14, 16 and 17 are believed

to be allowable in that they depend from what is believed to be allowable base claim 12. Moreover, each dependent claim is believed to be allowable for the subject matter recited therein since each of the recitations of the dependent claims are not shown by the prior art. Applicants respectfully disagree with the Examiner that routine skill in the art can make up the shortcomings of the Popp reference relative to the important structural and dimensional limitations of the dependent claims. Therefore, it is respectfully submitted that all dependent claims are allowable and a notice to that effect is respectfully requested.

In view of the foregoing, it is submitted that the present application is in condition for allowance and a notice to that effect is respectfully requested. However, if the Examiner deems that any issue remains after considering this response, he is invited to call the undersigned to expedite the prosecution and work out any such issue by telephone.

Respectfully submitted,



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